

1531

Sib1

09/424951

GAGATTAGAACACCATTTGAATGGGATTATTGGWATGACYCAGTTGTCRCTTGATACAGAG 1590  
 GluIleArgThrProLeuAsnGlyIleIleGlyMetThrGlnLeuSerLeuAspThrGlu 530  
 H1  
 TTGACRCAGTACCAACGAGAGATGTTGTCGATTGTGCATAACTTGGCAAATTCCTTGTTG 1650  
 LeuThrGlnTyrGlnArgGluMetLeuSerIleValHisAsnLeuAlaAsnSerLeuLeu 550  
 ACCATTATAGACGATATATTGGATATTTCTAAGATTGAGGCGAATAGAATGACGGTGGAA 1710  
 ThrIleIleAspAspIleLeuAspIleSerLysIleGluAlaAsnArgMetThrValGlu 570  
 CAGATTGATTTTTTCATTAAAGAGGGACAGTGTTTGGTGCATTGAAAACGTTAGCCGTCAA 1770  
 GlnIleAspPheSerLeuArgGlyThrValPheGlyAlaLeuLysThrLeuAlaValLys 590  
 GCTATTGAAAAAACCTAGACTTGACCTATCAATGTGATTCATCGTTTCCAGATAATCTT 1830  
 AlaIleGluLysAsnLeuAspLeuThrTyrGlnCysAspSerSerPheProAspAsnLeu 610  
 ATTGGAGATAGTTTTAGATTACGACAAGTTATTCTTAAGTTGGCTGGTAATGCTATTAAG 1890  
 IleGlyAspSerPheArgLeuArgGlnValIleLeuAsnLeuAlaGlyAsnAlaIleLys 630  
 N  
 TTTACTAAAGAGGGGAAAGTTAGTGTTAGTGTTGAAAAAGTCTGATAAAATGGTGTTAGAT 1950  
 PheThrLysGluGlyLysValSerValSerValLysLysSerAspLysMetValLeuAsp 650  
 AGTAAGTTGTTGTTAGAGGTTTGTGTTAGCGACACGGGAATAGGTATAGAGAAAGACAAA 2010  
 SerLysLeuLeuLeuGluValCysValSerAspThrGlyIleGlyIleGluLysAspLys 670  
 G1  
 TTGGGATTGATTTTCGATACCTTCTGTCAAGCTGATGGTTCTACTACAAGAAAGTTTGGT 2070  
 LeuGlyLeuIlePheAspThrPheCysGlnAlaAspGlySerThrThrArgLysPheGly 690  
 Sib2  
 GGTACAGGTTTAGGGTTGTCAATTTCCAAACAGTTGATACATTTAATGGGTGGAGAGATA 2130  
 GlyThrGlyLeuGlyLeuSerIleSerLysGlnLeuIleHisLeuMetGlyGlyGluIle 710  
 G2  
 TGGGTTACTTCGGAGTATGGATCCGGRTCAAACCTTTTATTTTACGGTGTGCGTGTGCCA 2190  
 TrpValThrSerGluTyrGlySerGlySerAsnPheTyrPheThrValCysValSerPro 730  
 TCTAATATTAGATATACTCGACAAACCGAACAATTGTTACCATTTAGTTCCCATTATGTG 2250  
 SerAsnIleArgTyrThrArgGlnThrGluGlnLeuLeuProPheSerSerHisTyrVal 750  
 TTATTTGTATCGACTGAGCATACTCAAGAAGAACTTGATGTGTTGAGAGATGGAATTATA 2310  
 LeuPheValSerThrGluHisThrGlnGluGluLeuAspValLeuArgAspGlyIleIle 770  
 GAACTTGGATTGATACCTATAATAGTGAGAAATATTGAAGATGCAACATTGACTGAGCCG 2370  
 GluLeuGlyLeuIleProIleIleValArgAsnIleGluAspAlaThrLeuThrGluPro 790  
 GTGAAATATGATATAATTATGATTGATTCGATAGAGATTGCCAAAAAGTTGAGGTTGTTA 2430  
 ValLysTyrAspIleIleMetIleAspSerIleGluIleAlaLysLysLeuArgLeuLeu 810  
 TCGGAGGTTAAATATATTCCGTTGGTTTTGGTCCATCATTCTATTCCACAGTTGAATATG 2490  
 SerGluValLysTyrIleProLeuValLeuValHisHisSerIleProGlnLeuAsnMet 830  
 AGAGTATGTATTGATTTGGGGATATCTTCCTATGCAAATACGCCATGTTTCGATCACGGAC 2550  
 ArgValCysIleAspLeuGlyIleSerSerTyrAlaAsnThrProCysSerIleThrAsp 850  
 TTGGCCAGTGCATTATACCAGCGTTGGAGTCGAGATCTATATCACAGAACTCAGACGAG 2610  
 LeuAlaSerAlaIleIleProAlaLeuGluSerArgSerIleSerGlnAsnSerAspGlu 870  
 TCGGTGAGGTACAAAATATTACTAGCAGAGGACAACCTCGTCAATCAGAACTTGACAGTT 2670  
 SerValArgTyrLysIleLeuLeuAlaGluAspAsnLeuValAsnGlnLysLeuAlaVal 890

Fig. 1a

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AGGATATTAGAAAAGCAAGGGCATCTGGTGAAGTAGTTGAGAACGGACTCGAGGCGTAC 2730  
ArgIleLeuGluLysGlnGlyHisLeuValGluValValGluAsnGlyLeuGluAlaTyr 910  
GAAGCGATTAAGAGGAATAAATATGATGTGGTGTGATGGATGTGCAAATGCCT 2784  
GluAlaIleLysArgAsnLysTyrAspValValLeuMetAspValGlnMetPro 928

← Sib3

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Fig. 1b

ATGAACCCCACTAAAAACCTCGGTTATCACCAATGCAGCCCTCTGTTTTTGAATACTC 60  
 MetAsnProThrLysLysProArgLeuSerProMetGlnProSerValPheGluIleLeu 20  
 AACGACCCTGAGCTTTATAGTCAGCACTGTCATAGCCTTAGGGAAACACTTCTTGATCAT 120  
 AsnAspProGluLeuTyrSerGlnHisCysHisSerLeuArgGluThrLeuLeuAspHis 40  
 TTCAACCATCAAGCTACACTTATCGACACTTATGAACATGAACTAGAAAAATCCAAAAAT 180  
 PheAsnHisGlnAlaThrLeuIleAspThrTyrGluHisGluLeuGluLysSerLysAsn 60  
 GCCAACAAAGCGTCCCAACAAGCACTTAGTGAAATAGGTACAGTTGTTATATCTGTTGCC 240  
 AlaAsnLysAlaSerGlnGlnAlaLeuSerGluIleGlyThrValValIleSerValAla 80  
 ATGGGAGACTTGTGCGAAAAAGTTGAGATTACACACAGTAGAAAATGACCCTGAGATTTTA 300  
 MetGlyAspLeuSerLysLysValGluIleHisThrValGluAsnAspProGluIleLeu 100  
 AAAGTCAAAATCACCATCAACACCATGATGGATCAATTACAGACATTTGCTAATGAGGTT 360  
 LysValLysIleThrIleAsnThrMetMetAspGlnLeuGlnThrPheAlaAsnGluVal 120  
 ACAAAGTCGCCACCGAAGTCGCAAATGGTGAAGTGGTGGACAAGCGAAAAATGATGGA 420  
 ThrLysValAlaThrGluValAlaAsnGlyGluLeuGlyGlyGlnAlaLysAsnAspGly 140  
 TCTGTTGGTATTTGGAGATCACTTACAGACAATGTTAATATTATGGCTCTTAATTTAACT 480  
 SerValGlyIleTrpArgSerLeuThrAspAsnValAsnIleMetAlaLeuAsnLeuThr 160  
 AACCAAGTGCGAGAAATTGCTGATGTCACACGTGCTGTTGCCAAGGGGGACTTGTCACGT 540  
 AsnGlnValArgGluIleAlaAspValThrArgAlaValAlaLysGlyAspLeuSerArg 180  
 AAAATTAATGTACACGCCCAGGGTGAAATCCTTCAACTCAACGTACAATAAACACCATG 600  
 LysIleAsnValHisAlaGlnGlyGluIleLeuGlnLeuGlnArgThrIleAsnThrMet 200  
 GTGGATCAGTTACGAACGTTTGCATTCGAAGTATCTAAAGTTGCTAGAGATGTTGGTGTG 660  
 ValAspGlnLeuArgThrPheAlaPheGluValSerLysValAlaArgAspValGlyVal 220  
 CTTGGTATATTAGGAGGACAAGCGTTGATTGAAAATGTTGAAGGTATTTGGGAAGAGTTG 720  
 LeuGlyIleLeuGlyGlyGlnAlaLeuIleGluAsnValGluGlyIleTrpGluGluLeu 240  
 ACTGATAATGTCAATGCCATGGCTCTTAATTTGACTACACAAGTGAGAAATATTGCCAAT 780  
 ThrAspAsnValAsnAlaMetAlaLeuAsnLeuThrThrGlnValArgAsnIleAlaAsn 260  
 GTCACCACTGCCGTTGCCAAGGGGGATTGTCGAAAAAAGTCACTGCTGATTGTAAGGGA 840  
 ValThrThrAlaValAlaLysGlyAspLeuSerLysLysValThrAlaAspCysLysGly 280  
 GAAATYCTTGATTTGAACTTACTATTAATCAAATGGTGGACCGATTACAGAATTTTGCT 900  
 GluIleLeuAspLeuLysLeuThrIleAsnGlnMetValAspArgLeuGlnAsnPheAla 300  
 CTTGCGGTGACGACATTGTCGAGAGAGGTTGGTACTTTGGGTATTTTGGGTGGACAAGCT 960  
 LeuAlaValThrThrLeuSerArgGluValGlyThrLeuGlyIleLeuGlyGlyGlnAla 320  
 AACGTACAGGATGTTGAAGGTGCTTGGAAACAGGTTACAGAAAATGTCAACCTAATGGCT 1020  
 AsnValGlnAspValGluGlyAlaTrpLysGlnValThrGluAsnValAsnLeuMetAla 340  
 ACTAATTTAACTAACCAAGTGAGATCTATTGCTACAGTTACTACTGCAGTTGCGCATGGT 1080  
 ThrAsnLeuThrAsnGlnValArgSerIleAlaThrValThrThrAlaValAlaHisGly 360  
 GATTTGTCGCAAAAGATTGATGGTCATCCCAAAGGAGAGATTTTACAATTGAAAAATACA 1140  
 AspLeuSerGlnLysIleAspGlyHisProLysGlyGluIleLeuGlnLeuLysAsnThr 380

Fig. 2a

ATCAACAAGATGGTGGACTC GCAGTTGTTTGCATCAGAAGTC GAAAGTGGCACAA 1200  
 IleAsnLysMetValAspSerLeuGlnLeuPheAlaSerGluValSerLysValAlaGln 400

GATGTTGGTATTAATGGAAAATTAGGTATTCAAGCACAAAGTTAGTGATGTTGATGGATTA 1260  
 AspValGlyIleAsnGlyLysLeuGlyIleGlnAlaGlnValSerAspValAspGlyLeu 420

TGAAGGAGATTACGTCTAATGTAAATACCATGGCTTCAAATTTAACTTCGCAAGTGAGA 1320  
TrpLysGluIleThrSerAsnValAsnThrMetAlaSerAsnLeuThrSerGlnValArg 440

GCTTTTGCACAGATTACTGCTGCTGCTACTGATGGGGATTTCACTAGATTTATTACTGTT 1380  
 AlaPheAlaGlnIleThrAlaAlaAlaThrAspGlyAspPheThrArgPheIleThrVal 460

GAAGCACTGGGAGAGATGGATGCGTTGAAAACAAAGATTAATCAAATGGTGTTTAACTTA 1440  
 GluAlaLeuGlyGluMetAspAlaLeuLysThrLysIleAsnGlnMetValPheAsnLeu 480

AGGGAATCGCTTCAAAGGAATACTGCGGCTAGAGAAGCTGCTGAGTTGGCCAATAGTGCG 1500  
 ArgGluSerLeuGlnArgAsnThrAlaAlaArgGluAlaAlaGluLeuAlaAsnSerAla 500

AAATCCGAGTTTTTTAGCAAACATGTTCGCATGAGATTAGAACACCATTGAATGGGATTATT 1560  
 LysSerGluPheLeuAlaAsnMet SerHisGluIleArgThrProLeuAsnGlyIleIle 520

**H1**

GGWATGACYCAGTTGTCRCTTGATACAGAGTTGACRCAGTACCAACGAGAGATGTTGTCTG 1620  
 GlyMetThrGlnLeuSerLeuAspThrGluLeuThrGlnTyrGlnArgGluMetLeuSer 540

ATTGTGCATAACTTGGCAAATTCCTTGTTGACCATTATAGACGATATATTGGATATTTCT 1680  
 IleValHisAsnLeuAlaAsnSerLeuLeuThrIleIleAspAspIleLeuAspIleSer 560

AAGATTGAGGCGAATAGAATGACGGTGAACAGATTGATTTTTTCATTAAGAGGGACAGTG 1740  
 LysIleGluAlaAsnArgMetThrValGluGlnIleAspPheSerLeuArgGlyThrVal 580

TTTGGTGCATTGAAAACGTTAGCCGTCAAAGCTATTGAAAAAACCTAGACTTGACCTAT 1800  
 PheGlyAlaLeuLysThrLeuAlaValLysAlaIleGluLysAsnLeuAspLeuThrTyr 600

CAATGTGATTCATCGTTTCCAGATAATCTTATTGGAGATAGTTTTAGATTACGACAAGTT 1860  
 GlnCysAspSerSerPheProAspAsnLeuIleGlyAspSerPheArgLeuArgGlnVal 620

ATTCTTAACTTGGCTGGTAATGCTATTAAGTTTACTAAAGAGGGGAAAGTTAGTGTTAGT 1920  
 IleLeu AsnLeuAlaGlyAsnAla IleLysPheThrLysGluGlyLysValSerValSer 640

**N**

GTGAAAAAGTCTGATAAAATGGTGTTAGATAGTAAGTTGTTGTTAGAGGTTTGTGTTAGC 1980  
 ValLysLysSerAspLysMetValLeuAspSerLysLeuLeuLeuGluValCysValSer 660

GACACGGAATAGGTATAGAGAAAGACAAATTGGGATTGATTTTCGATACCTTCTGTCAA 2040  
AspThrGlyIleGlyIleGluLysAspLysLeuGlyLeuIlePheAspThrPheCysGln 680

**G1**

GCTGATGGTTCTACTACAAGAAAGTTTGGTGGTACAGGTTTAGGGTTGTCAATTTCCAAA 2100  
 AlaAspGlySerThrThrArgLysPhe GlyGlyThrGlyLeuGlyLeu SerIleSerLys 700

**G2**

CAGTTGATACATTTAATGGGTGGAGAGATATGGGTTACTTCGGAGTATGGATCCGGRTCA 2160  
 GlnLeuIleHisLeuMetGlyGlyGluIleTrpValThrSerGluTyrGlySerGlySer 720

AACTTTTATTTTACGGTGTGCGTGTGCCATCTAATATTAGATATACTCGACAAACCGAA 2220  
 AsnPheTyrPheThrValCysValSerProSerAsnIleArgTyrThrArgGlnThrGlu 740

CAATTGTTACCATTTAGTTCCCATTTATGTGTTATTTGTATCGACTGAGCATACTCAAGAA 2280  
 GlnLeuLeuProPheSerSerHisTyrValLeuPheValSerThrGluHisThrGlnGlu 760

GAACTTGATGTGTTGAGAGATGGAATTATAGAAGTTGGATTGATACCTATAATAGTGAGA 2340  
 GluLeuAspValLeuArgAspGlyIleIleGluLeuGlyLeuIleProIleIleValArg 780

Fig. 2b

AATATTGAAGATGCAACATTGACTGAGCCGGTGAAATATGATATAATTATGATTGATTTCG	2400
AsnIleGluAspAlaThrLeuThrGluProValLysTyrAspIleIleMetIleAspSer	800
ATAGAGATTGCCAAAAAGTTGAGGTTGTTATCGGAGGTTAAATATATTCCGTTGGTTTTG	2460
IleGluIleAlaLysLysLeuArgLeuLeuSerGluValLysTyrIleProLeuValLeu	820
GTCCATCATTCTATTCCACAGTTGAATATGAGAGTATGTATTGATTTGGGGATATCTTCC	2520
ValHisHisSerIleProGlnLeuAsnMetArgValCysIleAspLeuGlyIleSerSer	840
TATGCAAATACGCCATGTTTCGATCACGGACTTGGCCAGTGCGATTATACCAGCGTTGGAG	2580
TyrAlaAsnThrProCysSerIleThrAspLeuAlaSerAlaIleIleProAlaLeuGlu	860
TCGAGATCTATATCACAGAACTCAGACGAGTCGGTGAGGTACAAAATATTACTAGCAGAG	2640
SerArgSerIleSerGlnAsnSerAspGluSerValArgTyrLysIleLeuLeuAlaGlu	880
GACAACCTCGTCAATCAGAACTTGCAGTTAGGATATTAGAAAAGCAAGGGCATCTGGTG	2700
AspAsnLeuValAsnGlnLysLeuAlaValArgIleLeuGluLysGlnGlyHisLeuVal	900
GAAGTAGTTGAGAACGGACTCGAGGCGTACGAAGCGATTAAGAGGAATAAATATGATGTG	2760
GluValValGluAsnGlyLeuGluAlaTyrGluAlaIleLysArgAsnLysTyrAspVal	920
GTGTTGATGGATGTGCAAATGCCTGTAATGGGTGGGTTTGAAGCTACGGAGAAGATTCTGA	2820
ValLeuMetAspValGlnMetProValMetGlyGlyPheGluAlaThrGluLysIleArg	940
<b>D</b>	
CAATGGGAGAAAAAGTCTAACCCAATTGACTCGTTGACGTTTAGGACTCCAATTATTGCC	2880
GlnTrpGluLysLysSerAsnProIleAspSerLeuThrPheArgThrProIleIleAla	960
CTCACTGCACACGCCATGTTAGGTGATAGAGAAAAGTCATTGGCCAAGGGGATGGACGAT	2940
LeuThrAlaHisAlaMetLeuGlyAspArgGluLysSerLeuAlaLysGlyMetAspAsp	980
TATGTGAGTAAGCCATTGAAGCCGAAATTGTTAATGCAGACGATAAACAAGTGTATTCAT	3000
TyrValSerLysProLeuLysProLysLeuLeuMetGlnThrIleAsnLysCysIleHis	1000
<b>H2</b>	
AATATTAACCGATTGAAAGAATTGTGCGAGAAATAGTAGGGGTAGCGATTTTGCAAAGAAG	3060
AsnIleAsnGlnLeuLysGluLeuSerArgAsnSerArgGlySerAspPheAlaLysLys	1020
ATGACCCGAAACACACCCGGAAGCACGACCCGTCAGGGGAGTGATGAGGGGAGTGTAAG	3120
MetThrArgAsnThrProGlySerThrThrArgGlnGlySerAspGluGlySerValLys	1040
GACATGATTGGGGACACTCCCCGTCAAGGGAGTGTGGAGGGAGGGGGTACAAGTAGTAGA	3180
AspMetIleGlyAspThrProArgGlnGlySerValGluGlyGlyGlyThrSerSerArg	1060
CCAGTACAGAGAAGGTCTGCCAGGGAGGGGTCGATCACTACAATTAGTGAACAAATCGAC	3240
ProValGlnArgArgSerAlaArgGluGlySerIleThrThrIleSerGluGlnIleAsp	1080
CGTTAG	3246
Arg***	1082

Fig. 2c

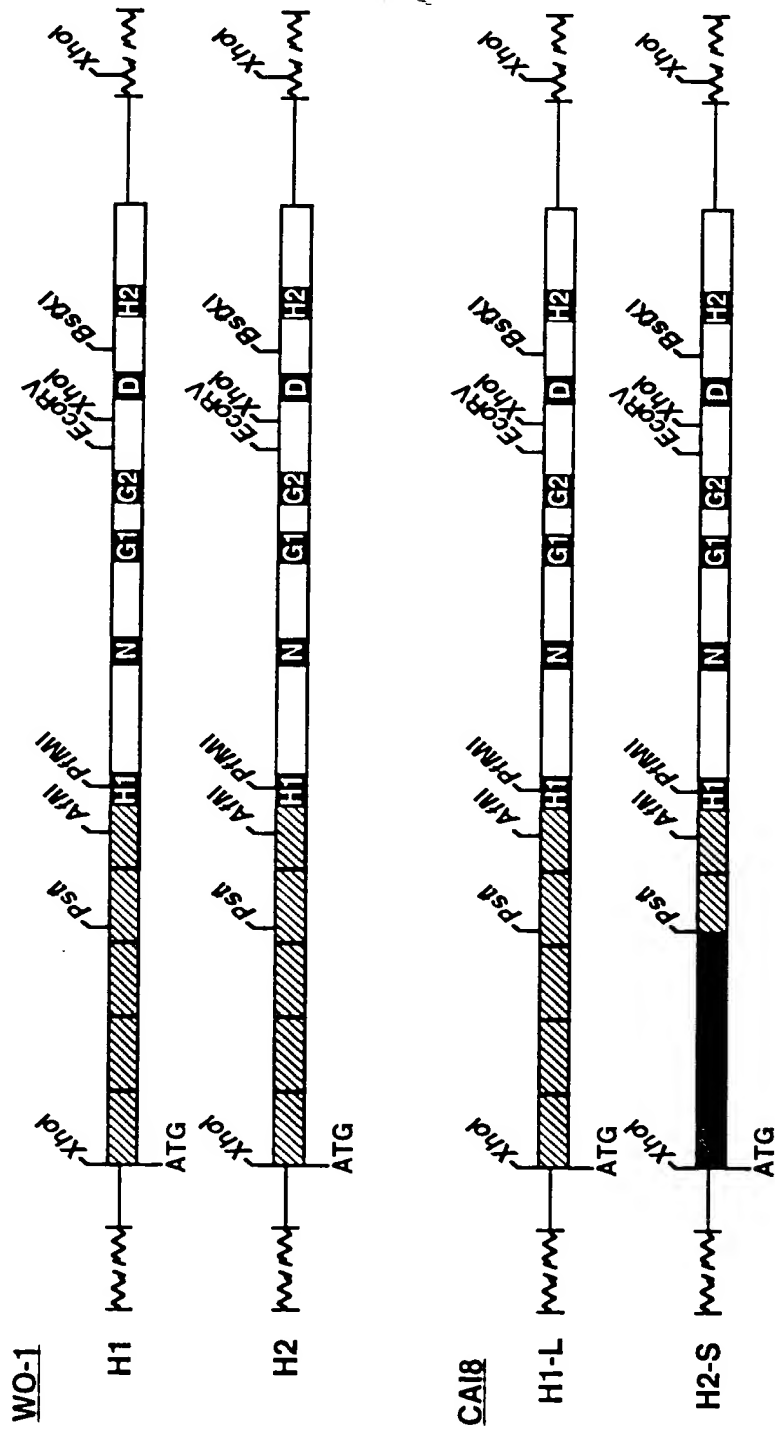


Fig. 3

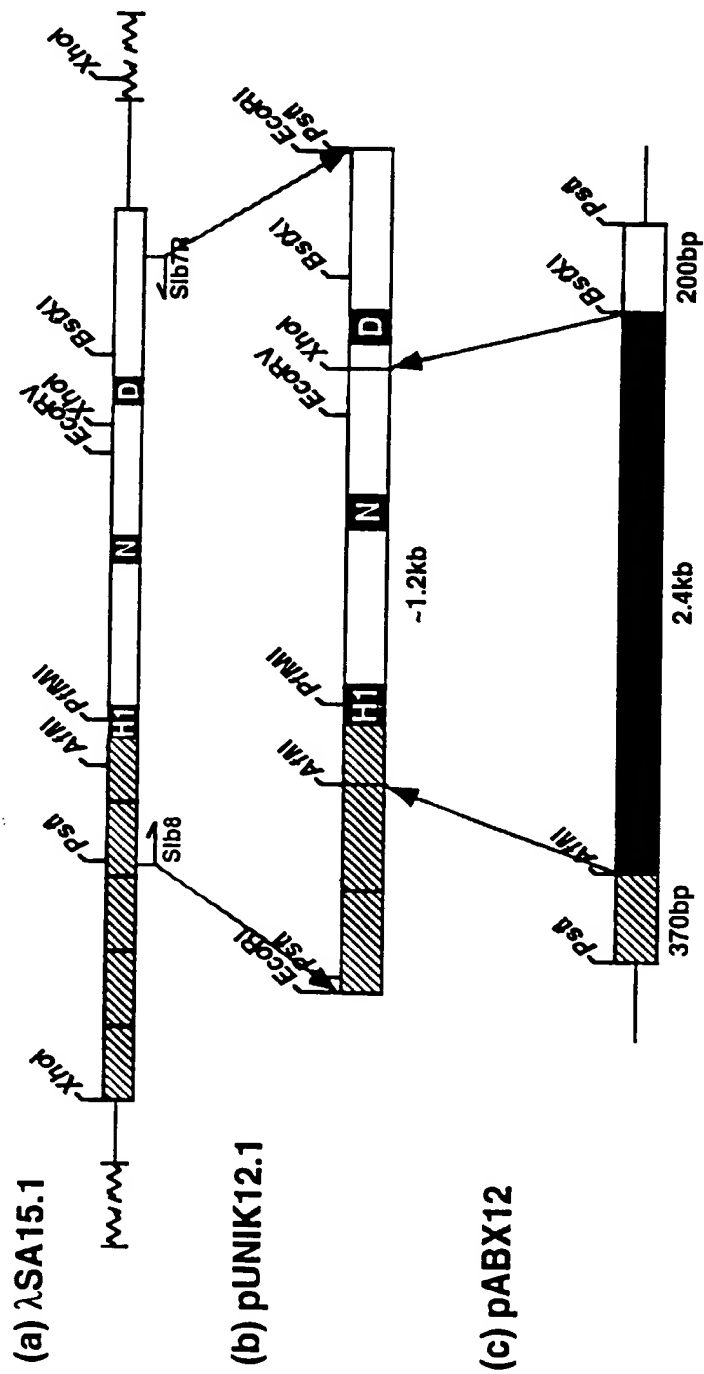


Fig. 4

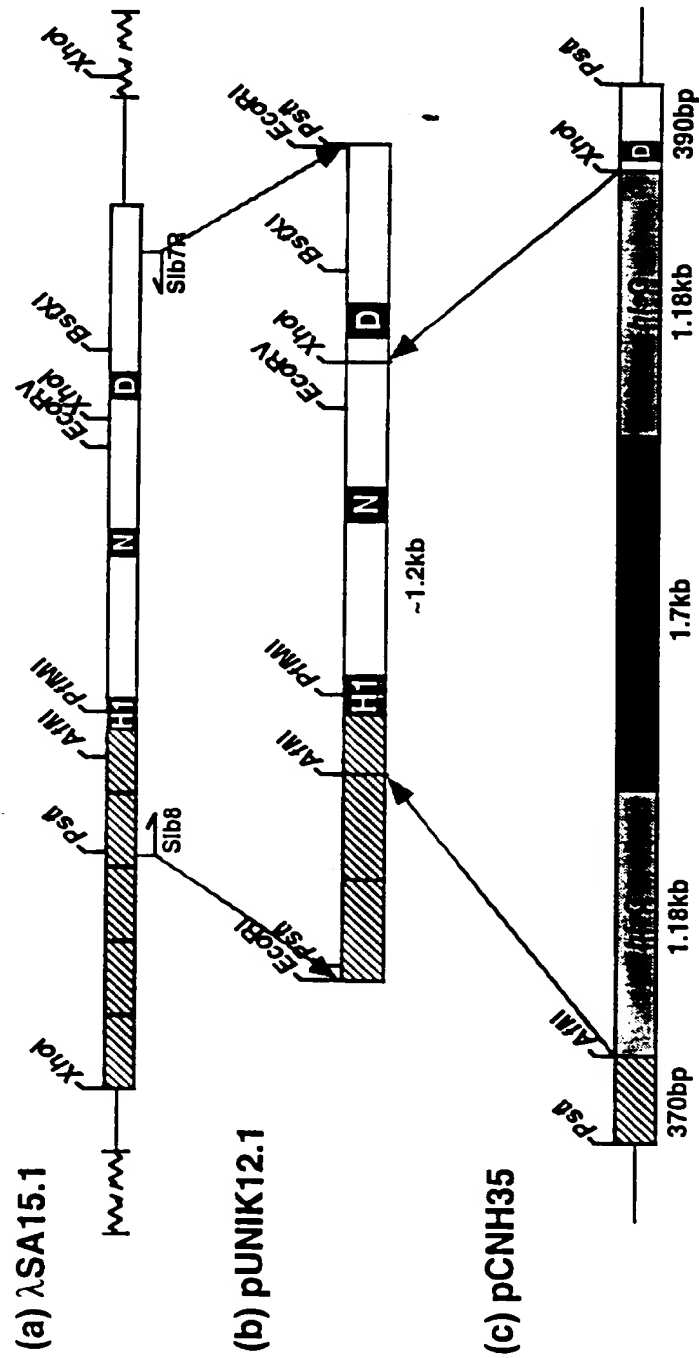


Fig. 5